Listing of Claims

1. (Cancel) A network of at least one router, comprising:

a data packet address translator, the data packet address translator manipulating address information of data packets routed by the network, so that a network device connected to the network perceives the network to be a layer 2 network.

wherein the network device is a layer two device, and the network comprises at least one layer three device.

further comprising a gateway, wherein the gateway comprises the data packet address translator.

wherein the gateway responds on behalf of the client with the MAC address of the client in response to an ARP request received by the network from the network device.

2. (Cancel) The network of claim 1, wherein network is connectable to a client.

3. (Cancel) The network of claim 2, wherein the network is a mesh network comprising access nodes.

4. (Cancel) The network of claim 2, wherein the network is a wireless mesh network comprising access nodes.

5. (Cancel) The network of claim 2, wherein the client is wirelessly connectable to the network.

6. (Cancel) The network of claim 2, wherein the data packet address translator manipulates address information of data packets routed by the

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network, so that the network device connected to the network perceives that it's directly connected to the client.

7. (Cancel) The network of claim 1, wherein the network device is a layer two device, and the network comprises at least one layer three device.

8. (Cancel) The network of claim 1, wherein the data packet address translator provides translation of a MAC address within the data packets.

9. (Cancel) The network of claim 8, wherein the translation of a MAC address within the data packet is based upon IP addresses in the data packets.

10. (Cancel) The network of claim 1, further comprising a gateway, wherein the gateway comprises the data packet address translator.

11. (Cancel) The network of claim 10, wherein the gateway responds on behalf of the client with the MAC address of the client in response to an ARP request received by the network from the network device.

12. (Cancel) The network of claim 11, wherein the gateway response is generated by referencing a locally maintained map of IP and MAC addresses of each client device.

13. (Cancel) The network of claim 11, wherein the gateway response is generated by referencing a remotely maintained map of IP and MAC addresses of each client device.

14. (Cancel) The network of claim 12, wherein the locally maintained map is an anti-ARP database.

15. (Cancel) The network of claim 10, wherein for an upstream data packet, the gateway sets a source MAC address of the data packet to a client MAC address.

16. (Cancel) The network of claim 15, wherein the gateway sets the source MAC address by consulting an anti-ARP database and extracting a client MAC address that corresponds with the source IP address of the data packets.

17. (Cancel) The network of claim 15, wherein the gateway inspects each data packet, detects a match of a packet IP address with an IP address within a filtering list, and modifies matched packets before forwarding by setting a MAC address as specified by the filtering list.

18. (Cancel) The network of claim 10, wherein for a downstream data packet, the gateway inspects the data packet to determine if a MAC address of the data packet matches the MAC address of the gateway, or the MAC address of a known client device.

19. (Cancel) The network of claim 18, wherein determination of a match comprises referencing an anti-ARP database.

20. (Cancel) The network of claim 18, wherein the gateway modifies the destination MAC address of the data packet to the destination MAC address of the gateway.

21. (Currently amended) A method of connecting a layer 2 network device with a client through a wireless network, the wireless network comprising at least one layer 3 router, the method comprising:
   the wireless network receiving data packets;

the wireless network modifying MAC addresses of the data packets so that the layer 2 network device perceives the wireless network as a layer 2 network.

22. (Currently amended) The method of claim 21, further comprising:
the wireless network responding to an ARP of the layer 2 network device with the MAC address of the client.

23. (Original) The method of claim 22, wherein the response is generated by referencing a maintained map of IP and MAC addresses of each client device.

24. (Currently amended) The method of claim 23, wherein the a source MAC address of the ARP response is a MAC address of the a gateway of the wireless network.

25. (Currently amended) The method of claim 23, wherein the locally maintained map is an locally maintained anti-ARP database.

26. (Currently amended) The method of claim 21, wherein for an upstream data packet, the wireless network sets a source MAC address of the data packet to a client MAC address.

27. (Original) The method of claim 26, wherein setting a source MAC address comprises:
consulting an AARP database; and
extracting a client MAC address that corresponds with the source IP address of the data packets.

28. (Currently amended) The method of claim 26, further including:
the a gateway inspecting each data packet, detecting a match of a packet IP address with an IP address within a filtering list; and

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modifying matched packets before forwarding with a corresponding MAC address as specified by the filtering list.

29. (Currently amended) The method of claim 21, wherein for a downstream data packet, ~~the~~ a gateway inspects the data packets to determine if a MAC address of any data packet matches a MAC address of the gateway, or a MAC address of a known client device.

30. (Cancel) A method of data packet address translating, comprising at least one of:

modifying a destination MAC address of a data packet based on a destination IP address of the data packet;

modifying a source MAC address of a data packet based on a destination IP address of the data packet;

modifying a destination MAC address of a data packet based on a source IP address of the data packet;

modifying a source MAC address of a data packet based on a source IP address of the data packet.

31. (Cancel) A method of responding to an ARP request, comprising:

comparing as IP address of the ARP request to a list of IP addresses; and

determining if a match exists between the IP address and listed IP address;

determining a MAC address corresponding to the list IP address;

responding to the ARP request.

32. (Cancel) The method of responding to an ARP request of claim 31, further comprising:setting a source MAC address of the ARP response to be a MAC address of the ARP response packet.

33. (New) A method of connecting a layer 2 network device with a client through a wireless network, the wireless network comprising at least one layer 3 router, the method comprising:

the wireless network receiving data packets;

the wireless network modifying MAC addresses of the data packets so that the layer 2 network device perceives the wireless network as a layer 2 network;

the wireless network responding to an ARP of the layer 2 network device with the MAC address of the client by referencing a maintained map of IP and MAC addresses of each client device, wherein a source MAC address of the ARP response is a MAC address of a gateway of the wireless network.

34. (New) A method of connecting a layer 2 network device with a client through a wireless network, the wireless network comprising at least one layer 3 router, the method comprising:

the wireless network receiving data packets;

the wireless network modifying MAC addresses of the data packets so that the layer 2 network device perceives the wireless network as a layer 2 network;

the wireless network responding to an ARP of the layer 2 network device with the MAC address of the client by referencing a maintained map of IP and MAC addresses of each client device, wherein the maintained map is a locally maintained anti-ARP database.